

Date: Wed, 14 Sep 94 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V94 #254
To: Ham-Space

Ham-Space Digest Wed, 14 Sep 94 Volume 94 : Issue 254

Today's Topics:

 AOP-2 opinion?
 SAREX Keps 9/10 at 15:30 UTC
 STS-64 Orbital State Vector Rev #14

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Sat, 10 Sep 1994 21:10:00 GMT
From: agate!howland.reston.ans.net!swiss.ans.net!malgudi.oar.net!infinet!n8emr!
gws@ames.arpa
Subject: AOP-2 opinion?
To: ham-space@ucsd.edu

Anyone had a chance to take a look at the cushcraft AOP-2
oscar array? I have the AOP-1 array but have it down for repairs
and figured I might as well update. From the ads I have seen it look like
a couple more elements on 2meters and a much larger antenna on 440.

comments

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Gary W. Sanders gws@n8emr.cmhnet.org, 72277,1325
N8EMR @ N8JYV (ip addr) 44.70.0.1 [Ohio AMPR address coordinator]
HAM BBS 614-895-2553 (1200/2400/V.32/PEP) Voice: 614-895-2552 (eves/weekends)

Date: Sat, 10 Sep 1994 09:46:58 MDT

From: ihnp4.ucsd.edu!sdd.hp.com!swrinde!emory!europa.eng.gtefsd.com!
newsxfer.itd.umich.edu!nntp.cs.ubc.ca!alberta!ve6mgs!usenet@network.ucsd.edu
Subject: SAREX Keps 9/10 at 15:30 UTC
To: ham-space@ucsd.edu

SB SAREX @ AMSAT \$STS-64.003
SAREX Keps 9/10 at 15:30 UTC

Silver Spring, MD September 10, 1994 at 15:30 UTC

The following represents the latest Keplerian Elements as
generated by Gil Carman, WA5NOM, at the Johnson Space Center.

STS-64

1	23251U	94059A	94253.61508163	.00083204	00000-0	14200-3	0	137
2	23251	57.0087	221.4445	0009356	272.6550	87.3481	16.05232506	128

Satellite: STS-64

Catalog number: 23251

Epoch time: 94253.61508163 = (10 SEP 94 14:45:43.05 UTC)

Element set: 013

Inclination: 57.0087 deg

RA of node: 221.4445 deg

Space Shuttle Flight STS-64

Eccentricity: .0009356

Keplerian element set JSC-013

Arg of perigee: 272.6550 deg

from NASA flight Day 2 vector

Mean anomaly: 87.3481 deg

Mean motion: 16.05232506 rev/day

Gil Carman

Decay rate: 8.3204e-04 rev/day^2

NASA Johnson Space Center

Epoch rev: 12

Checksum: 268

Submitted by Frank H. Bauer, KA3HDO for the SAREX Working Group

/EX

Date: Sun, 11 Sep 1994 01:12:35 GMT

From: netcomsv!netcom.com!astroman@decwrl.dec.com

Subject: STS-64 Orbital State Vector Rev #14

To: ham-space@ucsd.edu

S H U T T L E V E C T O R D A T A

Below is the rev 14 Earth-Fixed Greenwich (EFG) State Vector for STS-64.
This vector comes from NASA Goddard Space Flight Center and is provided
courtesy of the DOD C-Band Radar Network.

The data between the dotted lines may be read directly by VEC2TLE to estimate the Keplerian Elements for STS-64 in NASA Two-Line (TLE) format. The VEC2TLE software is available from a variety of sources including AMSAT-NA and the NASA Spacelink BBS (205) 895-0028 and may be registered free of charge for hobby use.

```
.....
Vector format = 117
Satellite Name:      STS-64
Catalog Number:      23251  94059A
Epoch Date/Time:     94253.75321787037
                      09/10/1994  18:04:38.024 UTC
EFG E:               10758839.41 ft
F:                   6162208.25 ft
G:                   17900246.29 ft
Edot:                -16911.3224 ft/s
Fdot:                17292.1830 ft/s
Gdot:                4209.6829 ft/s
ndot/2 (drag):        0.00074284453 rev/day^2
nddt/6:               2.29147E-08 rev/day^3
Bstar:                1.02923E-04 1/Earth Radii
Elset #:              4
Rev @ Epoch:          14.21836457971
.....
```

The drag values are estimated by VEC2TLE using a 1.0 drag multiplier.

To create a file for use by VEC2TLE, simply write the data between the dotted lines to a new (text) file. I recommend that the file you save the data have a .VIF extension (default for VEC2TLE vector input files).

MSDOS/PC software is available for conversion of OSV to 2 Line Keplerian Elements via ftp to:
oak.oakland.edu:/pub/msdos/hamradio/v2l9331.zip
and the SIMTEL archives.

State Vectors courtesy Ken Ernandes N2WWD

SM

Date: Tue, 13 Sep 1994 13:30:40 GMT
From: telesoft!garym@uunet.uu.net
To: ham-space@ucsd.edu

References <STS-64.94253.100@alsys.com>, <STS-64.94253.615@alsys.com>,
<STS-64.94254.860@alsys.com>

Reply-To : elements-request@alsys.com

Subject : STS-64 Element Set (94256.355)

STS-64

```
1 23251U 94059A   94256.35518513 +.000001905 10675-4 74542-5 0   140
2 23251   57.0075 208.5262 0009814 264.2494 95.7470 16.05008849   561
```

Satellite: STS-64

Catalog number: 23251

Epoch time: 94256.35518513 (13 SEP 94 08:31:27.99 UTC)

Element set: GSFC-014

Inclination: 57.0075 deg

RA of node: 208.5262 deg Space Shuttle Flight STS-64

Eccentricity: 0.0009814 Keplerian Elements

Arg of perigee: 264.2494 deg

Mean anomaly: 95.7470 deg

Mean motion: 16.05008849 rev/day Semi-major Axis: 6638.7031 Km

Decay rate: 0.19E-04 rev/day*2 Apogee Alt: 266.83 Km

Epoch rev: 56 Perigee Alt: 253.80 Km

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End of Ham-Space Digest V94 #254
